

## SEQUENCE LISTING

<110> ULLRICH, AXEL  
 RISAU, WERNER  
 MILLAUER, BIRGIT  
 GAZIT, AVIV  
 LEVITZKI, ALEX

<120> FLK-1 IS A RECEPTOR FOR VASCULAR ENDOTHELIAL GROWTH FACTOR

<130> 017853-0145

<140> 10/799,782

<141> 2004-03-15

<150> 09/766,678

<151> 2001-01-23

<150> 08/965,598

<151> 1997-11-06

<150> 08/193,829

<151> 1994-02-09

<150> 08/038,596

<151> 1993-03-26

<150> 07/975,750

<151> 1992-11-13

<160> 11

<170> PatentIn version 3.5

<210> 1

<211> 5470

<212> DNA

<213> Mus sp.

<220>

<221> CDS

<222> (286)..(4386)

<400> 1

tatagggcga attgggtacg ggacccccct cgagggtcgac ggtatcgata agcttgatat	60
cgaattcggg ccagactgt gtcccgacgc cgggataacc tggctgaccc gattccgcgg	120
acaccgctga cagccgcggc tggagccagg ggcgcgggtgc cccgcgctct ccccggtctt	180
gcgctgcggg ggccataccg cctctgtgac ttctttgcgg gccagggacg gagaaggagt	240
ctgtgcctga gaaactgggc tctgtgccca ggcgcgaggt gcagg atg gag agc aag	297
Met Glu Ser Lys	

gcg ctg cta gct gtc gct ctg tgg ttc tgc gtg gag acc cga gcc gcc Ala Leu Leu Ala Val Ala Leu Trp Phe Cys Val Glu Thr Arg Ala Ala 5 10 15 20	345
tct gtg ggt ttg act ggc gat ttt ctc cat ccc ccc aag ctc agc aca Ser Val Gly Leu Thr Gly Asp Phe Leu His Pro Pro Lys Leu Ser Thr 25 30 35	393
cag aaa gac ata ctg aca att ttg gca aat aca acc ctt cag att act Gln Lys Asp Ile Leu Thr Ile Leu Ala Asn Thr Thr Leu Gln Ile Thr 40 45 50	441
tgc agg gga cag cgg gac ctg gac tgg ctt tgg ccc aat gct cag cgt Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro Asn Ala Gln Arg 55 60 65	489
gat tct gag gaa agg gta ttg gtg act gaa tgc ggc ggt ggt gac agt Asp Ser Glu Glu Arg Val Leu Val Thr Glu Cys Gly Gly Gly Asp Ser 70 75 80	537
atc ttc tgc aaa aca ctc acc att ccc agg gtg gtt gga aat gat act Ile Phe Cys Lys Thr Leu Thr Ile Pro Arg Val Val Gly Asn Asp Thr 85 90 95 100	585
gga gcc tac aag tgc tcg tac cgg gac gtc gac ata gcc tcc act gtt Gly Ala Tyr Lys Cys Ser Tyr Arg Asp Val Asp Ile Ala Ser Thr Val 105 110 115	633
tat gtc tat gtt cga gat tac aga tca cca ttc atc gcc tct gtc agt Tyr Val Tyr Val Arg Asp Tyr Arg Ser Pro Phe Ile Ala Ser Val Ser 120 125 130	681
gac cag cat ggc atc gtg tac atc acc gag aac aag aac aaa act gtg Asp Gln His Gly Ile Val Tyr Ile Thr Glu Asn Lys Asn Lys Thr Val 135 140 145	729
gtg atc ccc tgc cga ggg tcg att tca aac ctc aat gtg tct ctt tgc Val Ile Pro Cys Arg Gly Ser Ile Ser Asn Leu Asn Val Ser Leu Cys 150 155 160	777
gct agg tat cca gaa aag aga ttt gtt ccg gat gga aac aga att tcc Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly Asn Arg Ile Ser 165 170 175 180	825
tgg gac agc gag ata ggc ttt act ctc ccc agt tac atg atc agc tat Trp Asp Ser Glu Ile Gly Phe Thr Leu Pro Ser Tyr Met Ile Ser Tyr 185 190 195	873
gcc ggc atg gtc ttc tgt gag gca aag atc aat gat gaa acc tat cag Ala Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp Glu Thr Tyr Gln 200 205 210	921
tct atc atg tac ata gtt gtg gtt gta gga tat agg att tat gat gtg Ser Ile Met Tyr Ile Val Val Val Val Gly Tyr Arg Ile Tyr Asp Val 215 220 225	969

att ctg agc ccc ccg cat gaa att gag cta tct gcc gga gaa aaa ctt Ile Leu Ser Pro Pro His Glu Ile Glu Leu Ser Ala Gly Glu Lys Leu 230 235 240	1017
gtc tta aat tgt aca gcg aga aca gag ctc aat gtg ggg ctt gat ttc Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Leu Asp Phe 245 250 255 260	1065
acc tgg cac tct cca cct tca aag tct cat cat aag aag att gta aac Thr Trp His Ser Pro Pro Ser Lys Ser His His Lys Lys Ile Val Asn 265 270 275	1113
cgg gat gtg aaa ccc ttt cct ggg act gtg gcg aag atg ttt ttg agc Arg Asp Val Lys Pro Phe Pro Gly Thr Val Ala Lys Met Phe Leu Ser 280 285 290	1161
acc ttg aca ata gaa agt gtg acc aag agt gac caa ggg gaa tac acc Thr Leu Thr Ile Glu Ser Val Thr Lys Ser Asp Gln Gly Glu Tyr Thr 295 300 305	1209
tgt gta gcg tcc agt gga cgg atg atc aag aga aat aga aca ttt gtc Cys Val Ala Ser Ser Gly Arg Met Ile Lys Arg Asn Arg Thr Phe Val 310 315 320	1257
cga gtt cac aca aag cct ttt att gct ttc ggt agt ggg atg aaa tct Arg Val His Thr Lys Pro Phe Ile Ala Phe Gly Ser Gly Met Lys Ser 325 330 335 340	1305
ttg gtg gaa gcc aca gtg ggc agt caa gtc cga atc cct gtg aag tat Leu Val Glu Ala Thr Val Gly Ser Gln Val Arg Ile Pro Val Lys Tyr 345 350 355	1353
ctc agt tac cca gct cct gat atc aaa tgg tac aga aat gga agg ccc Leu Ser Tyr Pro Ala Pro Asp Ile Lys Trp Tyr Arg Asn Gly Arg Pro 360 365 370	1401
att gag tcc aac tac aca atg att gtt ggc gat gaa ctc acc atc atg Ile Glu Ser Asn Tyr Thr Met Ile Val Gly Asp Glu Leu Thr Ile Met 375 380 385	1449
gaa gtg act gaa aga gat gca gga aac tac acg gtc atc ctc acc aac Glu Val Thr Glu Arg Asp Ala Gly Asn Tyr Thr Val Ile Leu Thr Asn 390 395 400	1497
ccc att tca atg gag aaa cag agc cac atg gtc tct ctg gtt gtg aat Pro Ile Ser Met Glu Lys Gln Ser His Met Val Ser Leu Val Val Asn 405 410 415 420	1545
gtc cca ccc cag atc ggt gag aaa gcc ttg atc tcg cct atg gat tcc Val Pro Pro Gln Ile Gly Glu Lys Ala Leu Ile Ser Pro Met Asp Ser 425 430 435	1593
tac cag tat ggg acc atg cag aca ttg aca tgc aca gtc tac gcc aac Tyr Gln Tyr Gly Thr Met Gln Thr Leu Thr Cys Thr Val Tyr Ala Asn 440 445 450	1641

cct	ccc	ctg	cac	cac	atc	cag	tgg	tac	tgg	cag	cta	gaa	gaa	gcc	tgc	1689
Pro	Pro	Leu	His	His	Ile	Gln	Trp	Tyr	Trp	Gln	Leu	Glu	Glu	Ala	Cys	
		455					460					465				
tcc	tac	aga	ccc	ggc	caa	aca	agc	ccg	tat	gct	tgt	aaa	gaa	tgg	aga	1737
Ser	Tyr	Arg	Pro	Gly	Gln	Thr	Ser	Pro	Tyr	Ala	Cys	Lys	Glu	Trp	Arg	
	470					475					480					
cac	gtg	gag	gat	ttc	cag	ggg	gga	aac	aag	atc	gaa	gtc	acc	aaa	aac	1785
His	Val	Glu	Asp	Phe	Gln	Gly	Gly	Asn	Lys	Ile	Glu	Val	Thr	Lys	Asn	
485					490					495					500	
caa	tat	gcc	ctg	att	gaa	gga	aaa	aac	aaa	act	gta	agt	acg	ctg	gtc	1833
Gln	Tyr	Ala	Leu	Ile	Glu	Gly	Lys	Asn	Lys	Thr	Val	Ser	Thr	Leu	Val	
				505					510					515		
atc	caa	gct	gcc	aac	gtg	tca	gcg	ttg	tac	aaa	tgt	gaa	gcc	atc	aac	1881
Ile	Gln	Ala	Ala	Asn	Val	Ser	Ala	Leu	Tyr	Lys	Cys	Glu	Ala	Ile	Asn	
			520					525					530			
aaa	gcg	gga	cga	gga	gag	agg	gtc	atc	tcc	ttc	cat	gtg	atc	agg	ggt	1929
Lys	Ala	Gly	Arg	Gly	Glu	Arg	Val	Ile	Ser	Phe	His	Val	Ile	Arg	Gly	
	535						540					545				
cct	gaa	att	act	gtg	caa	cct	gct	gcc	cag	cca	act	gag	cag	gag	agt	1977
Pro	Glu	Ile	Thr	Val	Gln	Pro	Ala	Ala	Gln	Pro	Thr	Glu	Gln	Glu	Ser	
	550					555					560					
gtg	tcc	ctg	ttg	tgc	act	gca	gac	aga	aat	acg	ttt	gag	aac	ctc	acg	2025
Val	Ser	Leu	Leu	Cys	Thr	Ala	Asp	Arg	Asn	Thr	Phe	Glu	Asn	Leu	Thr	
565					570					575					580	
tgg	tac	aag	ctt	ggc	tca	cag	gca	aca	tcg	gtc	cac	atg	ggc	gaa	tca	2073
Trp	Tyr	Lys	Leu	Gly	Ser	Gln	Ala	Thr	Ser	Val	His	Met	Gly	Glu	Ser	
				585					590					595		
ctc	aca	cca	gtt	tgc	aag	aac	ttg	gat	gct	ctt	tgg	aaa	ctg	aat	ggc	2121
Leu	Thr	Pro	Val	Cys	Lys	Asn	Leu	Asp	Ala	Leu	Trp	Lys	Leu	Asn	Gly	
			600					605					610			
acc	atg	ttt	tct	aac	agc	aca	aat	gac	atc	ttg	att	gtg	gca	ttt	cag	2169
Thr	Met	Phe	Ser	Asn	Ser	Thr	Asn	Asp	Ile	Leu	Ile	Val	Ala	Phe	Gln	
		615					620					625				
aat	gcc	tct	ctg	cag	gac	caa	ggc	gac	tat	gtt	tgc	tct	gct	caa	gat	2217
Asn	Ala	Ser	Leu	Gln	Asp	Gln	Gly	Asp	Tyr	Val	Cys	Ser	Ala	Gln	Asp	
	630					635					640					
aag	aag	acc	aag	aaa	aga	cat	tgc	ctg	gtc	aaa	cag	ctc	atc	atc	cta	2265
Lys	Lys	Thr	Lys	Lys	Arg	His	Cys	Leu	Val	Lys	Gln	Leu	Ile	Ile	Leu	
645					650					655					660	
gag	cgc	atg	gca	ccc	atg	atc	acc	gga	aat	ctg	gag	aat	cag	aca	aca	2313
Glu	Arg	Met	Ala	Pro	Met	Ile	Thr	Gly	Asn	Leu	Glu	Asn	Gln	Thr	Thr	
				665				670						675		

acc att ggc gag acc att gaa gtg act tgc cca gca tct gga aat cct	2361
Thr Ile Gly Glu Thr Ile Glu Val Thr Cys Pro Ala Ser Gly Asn Pro	
680 685 690	
acc cca cac att aca tgg ttc aaa gac aac gag acc ctg gta gaa gat	2409
Thr Pro His Ile Thr Trp Phe Lys Asp Asn Glu Thr Leu Val Glu Asp	
695 700 705	
tca ggc att gta ctg aga gat ggg aac cgg aac ctg act atc cgc agg	2457
Ser Gly Ile Val Leu Arg Asp Gly Asn Arg Asn Leu Thr Ile Arg Arg	
710 715 720	
gtg agg aag gag gat gga ggc ctc tac acc tgc cag gcc tgc aat gtc	2505
Val Arg Lys Glu Asp Gly Gly Leu Tyr Thr Cys Gln Ala Cys Asn Val	
725 730 735 740	
ctt ggc tgt gca aga gcg gag acg ctc ttc ata ata gaa ggt gcc cag	2553
Leu Gly Cys Ala Arg Ala Glu Thr Leu Phe Ile Ile Glu Gly Ala Gln	
745 750 755	
gaa aag acc aac ttg gaa gtc att atc ctc gtc ggc act gca gtg att	2601
Glu Lys Thr Asn Leu Glu Val Ile Ile Leu Val Gly Thr Ala Val Ile	
760 765 770	
gcc atg ttc ttc tgg ctc ctt ctt gtc att gtc cta cgg acc gtt aag	2649
Ala Met Phe Phe Trp Leu Leu Leu Val Ile Val Leu Arg Thr Val Lys	
775 780 785	
cgg gcc aat gaa ggg gaa ctg aag aca ggc tac ttg tct att gtc atg	2697
Arg Ala Asn Glu Gly Glu Leu Lys Thr Gly Tyr Leu Ser Ile Val Met	
790 795 800	
gat cca gat gaa ttg ccc ttg gat gag cgc tgt gaa cgc ttg cct tat	2745
Asp Pro Asp Glu Leu Pro Leu Asp Glu Arg Cys Glu Arg Leu Pro Tyr	
805 810 815 820	
gat gcc agc aag tgg gaa ttc ccc agg gac cgg ctg aaa cta gga aaa	2793
Asp Ala Ser Lys Trp Glu Phe Pro Arg Asp Arg Leu Lys Leu Gly Lys	
825 830 835	
cct ctt ggc cgc ggt gcc ttc ggc caa gtg att gag gca gac gct ttt	2841
Pro Leu Gly Arg Gly Ala Phe Gly Gln Val Ile Glu Ala Asp Ala Phe	
840 845 850	
gga att gac aag aca gcg act tgc aaa aca gta gcc gtc aag atg ttg	2889
Gly Ile Asp Lys Thr Ala Thr Cys Lys Thr Val Ala Val Lys Met Leu	
855 860 865	
aaa gaa gga gca aca cac agc gag cat cga gcc ctc atg tct gaa ctc	2937
Lys Glu Gly Ala Thr His Ser Glu His Arg Ala Leu Met Ser Glu Leu	
870 875 880	
aag atc ctc atc cac att ggt cac cat ctc aat gtg gtg aac ctc cta	2985
Lys Ile Leu Ile His Ile Gly His His Leu Asn Val Val Asn Leu Leu	
885 890 895 900	

ggc gcc tgc acc aag ccg gga ggg cct ctc atg gtg att gtg gaa ttc	3033
Gly Ala Cys Thr Lys Pro Gly Gly Pro Leu Met Val Ile Val Glu Phe	
905 910 915	
tgc aag ttt gga aac cta tca act tac tta cgg ggc aag aga aat gaa	3081
Cys Lys Phe Gly Asn Leu Ser Thr Tyr Leu Arg Gly Lys Arg Asn Glu	
920 925 930	
ttt gtt ccc tat aag agc aaa ggg gca cgc ttc cgc cag ggc aag gac	3129
Phe Val Pro Tyr Lys Ser Lys Gly Ala Arg Phe Arg Gln Gly Lys Asp	
935 940 945	
tac gtt ggg gag ctc tcc gtg gat ctg aaa aga cgc ttg gac agc atc	3177
Tyr Val Gly Glu Leu Ser Val Asp Leu Lys Arg Arg Leu Asp Ser Ile	
950 955 960	
acc agc agc cag agc tct gcc agc tca ggc ttt gtt gag gag aaa tcg	3225
Thr Ser Ser Gln Ser Ser Ala Ser Ser Gly Phe Val Glu Glu Lys Ser	
965 970 975 980	
ctc agt gat gta gag gaa gaa gaa gct tct gaa gaa ctg tac aag gac	3273
Leu Ser Asp Val Glu Glu Glu Glu Ala Ser Glu Glu Leu Tyr Lys Asp	
985 990 995	
ttc ctg acc ttg gag cat ctc atc tgt tac agc ttc caa gtg gct	3318
Phe Leu Thr Leu Glu His Leu Ile Cys Tyr Ser Phe Gln Val Ala	
1000 1005 1010	
aag ggc atg gag ttc ttg gca tca agg aag tgt atc cac agg gac	3363
Lys Gly Met Glu Phe Leu Ala Ser Arg Lys Cys Ile His Arg Asp	
1015 1020 1025	
ctg gca gca cga aac att ctc cta tcg gag aag aat gtg gtt aag	3408
Leu Ala Ala Arg Asn Ile Leu Leu Ser Glu Lys Asn Val Val Lys	
1030 1035 1040	
atc tgt gac ttc ggc ttg gcc cgg gac att tat aaa gac ccg gat	3453
Ile Cys Asp Phe Gly Leu Ala Arg Asp Ile Tyr Lys Asp Pro Asp	
1045 1050 1055	
tat gtc aga aaa gga gat gcc cga ctc cct ttg aag tgg atg gcc	3498
Tyr Val Arg Lys Gly Asp Ala Arg Leu Pro Leu Lys Trp Met Ala	
1060 1065 1070	
ccg gaa acc att ttt gac aga gta tac aca att cag agc gat gtg	3543
Pro Glu Thr Ile Phe Asp Arg Val Tyr Thr Ile Gln Ser Asp Val	
1075 1080 1085	
tgg tct ttc ggt gtg ttg ctc tgg gaa ata ttt tcc tta ggt gcc	3588
Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe Ser Leu Gly Ala	
1090 1095 1100	
tcc cca tac cct ggg gtc aag att gat gaa gaa ttt tgt agg aga	3633
Ser Pro Tyr Pro Gly Val Lys Ile Asp Glu Glu Phe Cys Arg Arg	
1105 1110 1115	

ttg aaa gaa gga	act aga atg cgg gct	cct gac tac act acc cca	3678
Leu Lys Glu Gly	Thr Arg Met Arg Ala	Pro Asp Tyr Thr Thr Pro	
1120	1125	1130	
gaa atg tac cag	acc atg ctg gac tgc	tgg cat gag gac ccc aac	3723
Glu Met Tyr Gln	Thr Met Leu Asp Cys	Trp His Glu Asp Pro Asn	
1135	1140	1145	
cag aga ccc tcg	ttt tca gag ttg gtg	gag cat ttg gga aac ctc	3768
Gln Arg Pro Ser	Phe Ser Glu Leu Val	Glu His Leu Gly Asn Leu	
1150	1155	1160	
ctg caa gca aat	gcg cag cag gat ggc	aaa gac tat att gtt ctt	3813
Leu Gln Ala Asn	Ala Gln Gln Asp Gly	Lys Asp Tyr Ile Val Leu	
1165	1170	1175	
cca atg tca gag	aca ctg agc atg gaa	gag gat tct gga ctc tcc	3858
Pro Met Ser Glu	Thr Leu Ser Met Glu	Glu Asp Ser Gly Leu Ser	
1180	1185	1190	
ctg cct acc tca	cct gtt tcc tgt atg	gag gaa gag gaa gtg tgc	3903
Leu Pro Thr Ser	Pro Val Ser Cys Met	Glu Glu Glu Glu Val Cys	
1195	1200	1205	
gac ccc aaa ttc	cat tat gac aac aca	gca gga atc agt cat tat	3948
Asp Pro Lys Phe	His Tyr Asp Asn Thr	Ala Gly Ile Ser His Tyr	
1210	1215	1220	
ctc cag aac agt	aag cga aag agc cgg	cca gtg agt gta aaa aca	3993
Leu Gln Asn Ser	Lys Arg Lys Ser Arg	Pro Val Ser Val Lys Thr	
1225	1230	1235	
ttt gaa gat atc	cca ttg gag gaa cca	gaa gta aaa gtg atc cca	4038
Phe Glu Asp Ile	Pro Leu Glu Glu Pro	Glu Val Lys Val Ile Pro	
1240	1245	1250	
gat gac agc cag	aca gac agt ggg atg	gtc ctt gca tca gaa gag	4083
Asp Asp Ser Gln	Thr Asp Ser Gly Met	Val Leu Ala Ser Glu Glu	
1255	1260	1265	
ctg aaa act ctg	gaa gac agg aac aaa	tta tct cca tct ttt ggt	4128
Leu Lys Thr Leu	Glu Asp Arg Asn Lys	Leu Ser Pro Ser Phe Gly	
1270	1275	1280	
gga atg atg ccc	agt aaa agc agg gag	tct gtg gcc tcg gaa ggc	4173
Gly Met Met Pro	Ser Lys Ser Arg Glu	Ser Val Ala Ser Glu Gly	
1285	1290	1295	
tcc aac cag acc	agt ggc tac cag tct	ggg tat cac tca gat gac	4218
Ser Asn Gln Thr	Ser Gly Tyr Gln Ser	Gly Tyr His Ser Asp Asp	
1300	1305	1310	
aca gac acc acc	gtg tac tcc agc gac	gag gca gga ctt tta aag	4263
Thr Asp Thr Thr	Val Tyr Ser Ser Asp	Glu Ala Gly Leu Leu Lys	
1315	1320	1325	

```

atg gtg gat gct gca gtt cac gct gac tca ggg acc aca ctg cag 4308
Met Val Asp Ala Ala Val His Ala Asp Ser Gly Thr Thr Leu Gln
      1330      1335      1340

ctc acc tcc tgt tta aat gga agt ggt cct gtc ccg gct ccg ccc 4353
Leu Thr Ser Cys Leu Asn Gly Ser Gly Pro Val Pro Ala Pro Pro
      1345      1350      1355

cca act cct gga aat cac gag aga ggt gct gct tagattttca 4396
Pro Thr Pro Gly Asn His Glu Arg Gly Ala Ala
      1360      1365

agtgttggttc tttccaccac ccggaagtag ccacatttga ttttcatttt tggaggaggg 4456

acctcagact gcaaggagct tgtcctcagg gcatttccag agaagatgcc catgacccaa 4516

gaatgtgttg actctactct cttttccatt catttaaaag tcctatataa tgtgccttgc 4576

tgtggtctca ctaccagtta aagcaaaaga ctttcaaaca cgtggactct gtccctccaag 4636

aagtggcaac ggcacctctg tgaaactgga tcgaatgggc aatgctttgt gtgttgagga 4696

tgggtgagat gtcccagggc cgagtctgtc taccttgagag gctttgtgga ggatgcgggc 4756

tatgagccaa gtgttaagtg tgggatgtgg actgggagga aggaaggcgc aagtcgctcg 4816

gagagcgggt ggagcctgca gatgcattgt gctggctctg gtggaggtgg gcttgtggcc 4876

tgtcaggaaa cgcaaaggcg gccggcaggg tttggttttg gaaggtttgc gtgctcttca 4936

cagtcggggt acaggcgagt tccctgtggc gtttctact cctaatgaga gttccttccg 4996

gactcttacg tgtctcctgg cctggcccca ggaaggaaat gatgcagctt gtccttctct 5056

catctctcag gctgtgcctt aattcagaac accaaaagag aggaacgctc gcagaggctc 5116

ctgacggggc cgaagaattg tgagaacaga acagaaactc agggtttctg ctgggtggag 5176

accacgtgg cgccctgggt gcaggtctga gggttctctg tcaagtggcg gtaaaggctc 5236

aggctgggtg tcttctctta tctccactcc tgtcaggccc ccaagtcctc agtattttag 5296

ctttgtggct tctgatggc agaaaaatct taattgggtg gtttgcctc cagataatca 5356

ctagccagat ttcgaaatta ctttttagcc gaggttatga taacatctac tgtatccttt 5416

agaattttta cctataaaac tatgtctact ggtttctgcc tgtgtgctta tggt 5470

```

<210> 2

<211> 1367

<212> PRT

<213> Mus sp.

<400> 2

```

Met Glu Ser Lys Ala Leu Leu Ala Val Ala Leu Trp Phe Cys Val Glu
1          5          10          15

```



Thr Arg Ala Ala Ser Val Gly Leu Thr Gly Asp Phe Leu His Pro Pro  
                   20                                  25                                  30

Lys Leu Ser Thr Gln Lys Asp Ile Leu Thr Ile Leu Ala Asn Thr Thr  
                   35                                  40                                  45

Leu Gln Ile Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro  
           50                                  55                                  60

Asn Ala Gln Arg Asp Ser Glu Glu Arg Val Leu Val Thr Glu Cys Gly  
   65                                  70                                  75                                  80

Gly Gly Asp Ser Ile Phe Cys Lys Thr Leu Thr Ile Pro Arg Val Val  
                                   85                                  90                                  95

Gly Asn Asp Thr Gly Ala Tyr Lys Cys Ser Tyr Arg Asp Val Asp Ile  
                   100                                  105                                  110

Ala Ser Thr Val Tyr Val Tyr Val Arg Asp Tyr Arg Ser Pro Phe Ile  
           115                                  120                                  125

Ala Ser Val Ser Asp Gln His Gly Ile Val Tyr Ile Thr Glu Asn Lys  
   130                                  135                                  140

Asn Lys Thr Val Val Ile Pro Cys Arg Gly Ser Ile Ser Asn Leu Asn  
  145                                  150                                  155                                  160

Val Ser Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly  
                   165                                  170                                  175

Asn Arg Ile Ser Trp Asp Ser Glu Ile Gly Phe Thr Leu Pro Ser Tyr  
                   180                                  185                                  190

Met Ile Ser Tyr Ala Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp  
           195                                  200                                  205

Glu Thr Tyr Gln Ser Ile Met Tyr Ile Val Val Val Val Gly Tyr Arg  
   210                                  215                                  220

Ile Tyr Asp Val Ile Leu Ser Pro Pro His Glu Ile Glu Leu Ser Ala  
  225                                  230                                  235                                  240

Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val  
 245 250 255

Gly Leu Asp Phe Thr Trp His Ser Pro Pro Ser Lys Ser His His Lys  
 260 265 270

Lys Ile Val Asn Arg Asp Val Lys Pro Phe Pro Gly Thr Val Ala Lys  
 275 280 285

Met Phe Leu Ser Thr Leu Thr Ile Glu Ser Val Thr Lys Ser Asp Gln  
 290 295 300

Gly Glu Tyr Thr Cys Val Ala Ser Ser Gly Arg Met Ile Lys Arg Asn  
 305 310 315 320

Arg Thr Phe Val Arg Val His Thr Lys Pro Phe Ile Ala Phe Gly Ser  
 325 330 335

Gly Met Lys Ser Leu Val Glu Ala Thr Val Gly Ser Gln Val Arg Ile  
 340 345 350

Pro Val Lys Tyr Leu Ser Tyr Pro Ala Pro Asp Ile Lys Trp Tyr Arg  
 355 360 365

Asn Gly Arg Pro Ile Glu Ser Asn Tyr Thr Met Ile Val Gly Asp Glu  
 370 375 380

Leu Thr Ile Met Glu Val Thr Glu Arg Asp Ala Gly Asn Tyr Thr Val  
 385 390 395 400

Ile Leu Thr Asn Pro Ile Ser Met Glu Lys Gln Ser His Met Val Ser  
 405 410 415

Leu Val Val Asn Val Pro Pro Gln Ile Gly Glu Lys Ala Leu Ile Ser  
 420 425 430

Pro Met Asp Ser Tyr Gln Tyr Gly Thr Met Gln Thr Leu Thr Cys Thr  
 435 440 445

Val Tyr Ala Asn Pro Pro Leu His His Ile Gln Trp Tyr Trp Gln Leu  
 450 455 460

Glu Glu Ala Cys Ser Tyr Arg Pro Gly Gln Thr Ser Pro Tyr Ala Cys  
 465 470 475 480

Lys Glu Trp Arg His Val Glu Asp Phe Gln Gly Gly Asn Lys Ile Glu  
                     485                    490                    495

Val Thr Lys Asn Gln Tyr Ala Leu Ile Glu Gly Lys Asn Lys Thr Val  
                     500                    505                    510

Ser Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr Lys Cys  
                     515                    520                    525

Glu Ala Ile Asn Lys Ala Gly Arg Gly Glu Arg Val Ile Ser Phe His  
                     530                    535                    540

Val Ile Arg Gly Pro Glu Ile Thr Val Gln Pro Ala Ala Gln Pro Thr  
                     545                    550                    555                    560

Glu Gln Glu Ser Val Ser Leu Leu Cys Thr Ala Asp Arg Asn Thr Phe  
                     565                    570                    575

Glu Asn Leu Thr Trp Tyr Lys Leu Gly Ser Gln Ala Thr Ser Val His  
                     580                    585                    590

Met Gly Glu Ser Leu Thr Pro Val Cys Lys Asn Leu Asp Ala Leu Trp  
                     595                    600                    605

Lys Leu Asn Gly Thr Met Phe Ser Asn Ser Thr Asn Asp Ile Leu Ile  
                     610                    615                    620

Val Ala Phe Gln Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr Val Cys  
                     625                    630                    635                    640

Ser Ala Gln Asp Lys Lys Thr Lys Lys Arg His Cys Leu Val Lys Gln  
                     645                    650                    655

Leu Ile Ile Leu Glu Arg Met Ala Pro Met Ile Thr Gly Asn Leu Glu  
                     660                    665                    670

Asn Gln Thr Thr Thr Ile Gly Glu Thr Ile Glu Val Thr Cys Pro Ala  
                     675                    680                    685

Ser Gly Asn Pro Thr Pro His Ile Thr Trp Phe Lys Asp Asn Glu Thr  
                     690                    695                    700

Leu Val Glu Asp Ser Gly Ile Val Leu Arg Asp Gly Asn Arg Asn Leu  
 705 710 715 720

Thr Ile Arg Arg Val Arg Lys Glu Asp Gly Gly Leu Tyr Thr Cys Gln  
 725 730 735

Ala Cys Asn Val Leu Gly Cys Ala Arg Ala Glu Thr Leu Phe Ile Ile  
 740 745 750

Glu Gly Ala Gln Glu Lys Thr Asn Leu Glu Val Ile Ile Leu Val Gly  
 755 760 765

Thr Ala Val Ile Ala Met Phe Phe Trp Leu Leu Leu Val Ile Val Leu  
 770 775 780

Arg Thr Val Lys Arg Ala Asn Glu Gly Glu Leu Lys Thr Gly Tyr Leu  
 785 790 795 800

Ser Ile Val Met Asp Pro Asp Glu Leu Pro Leu Asp Glu Arg Cys Glu  
 805 810 815

Arg Leu Pro Tyr Asp Ala Ser Lys Trp Glu Phe Pro Arg Asp Arg Leu  
 820 825 830

Lys Leu Gly Lys Pro Leu Gly Arg Gly Ala Phe Gly Gln Val Ile Glu  
 835 840 845

Ala Asp Ala Phe Gly Ile Asp Lys Thr Ala Thr Cys Lys Thr Val Ala  
 850 855 860

Val Lys Met Leu Lys Glu Gly Ala Thr His Ser Glu His Arg Ala Leu  
 865 870 875 880

Met Ser Glu Leu Lys Ile Leu Ile His Ile Gly His His Leu Asn Val  
 885 890 895

Val Asn Leu Leu Gly Ala Cys Thr Lys Pro Gly Gly Pro Leu Met Val  
 900 905 910

Ile Val Glu Phe Cys Lys Phe Gly Asn Leu Ser Thr Tyr Leu Arg Gly  
 915 920 925

Lys Arg Asn Glu Phe Val Pro Tyr Lys Ser Lys Gly Ala Arg Phe Arg  
 930 935 940

Gln Gly Lys Asp Tyr Val Gly Glu Leu Ser Val Asp Leu Lys Arg Arg  
 945 950 955 960

Leu Asp Ser Ile Thr Ser Ser Gln Ser Ser Ala Ser Ser Gly Phe Val  
 965 970 975

Glu Glu Lys Ser Leu Ser Asp Val Glu Glu Glu Glu Ala Ser Glu Glu  
 980 985 990

Leu Tyr Lys Asp Phe Leu Thr Leu Glu His Leu Ile Cys Tyr Ser Phe  
 995 1000 1005

Gln Val Ala Lys Gly Met Glu Phe Leu Ala Ser Arg Lys Cys Ile  
 1010 1015 1020

His Arg Asp Leu Ala Ala Arg Asn Ile Leu Leu Ser Glu Lys Asn  
 1025 1030 1035

Val Val Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp Ile Tyr Lys  
 1040 1045 1050

Asp Pro Asp Tyr Val Arg Lys Gly Asp Ala Arg Leu Pro Leu Lys  
 1055 1060 1065

Trp Met Ala Pro Glu Thr Ile Phe Asp Arg Val Tyr Thr Ile Gln  
 1070 1075 1080

Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe Ser  
 1085 1090 1095

Leu Gly Ala Ser Pro Tyr Pro Gly Val Lys Ile Asp Glu Glu Phe  
 1100 1105 1110

Cys Arg Arg Leu Lys Glu Gly Thr Arg Met Arg Ala Pro Asp Tyr  
 1115 1120 1125

Thr Thr Pro Glu Met Tyr Gln Thr Met Leu Asp Cys Trp His Glu  
 1130 1135 1140

Asp Pro Asn Gln Arg Pro Ser Phe Ser Glu Leu Val Glu His Leu  
 1145 1150 1155

Gly	Asn	Leu	Leu	Gln	Ala	Asn	Ala	Gln	Gln	Asp	Gly	Lys	Asp	Tyr
1160						1165					1170			
Ile	Val	Leu	Pro	Met	Ser	Glu	Thr	Leu	Ser	Met	Glu	Glu	Asp	Ser
1175						1180					1185			
Gly	Leu	Ser	Leu	Pro	Thr	Ser	Pro	Val	Ser	Cys	Met	Glu	Glu	Glu
1190						1195					1200			
Glu	Val	Cys	Asp	Pro	Lys	Phe	His	Tyr	Asp	Asn	Thr	Ala	Gly	Ile
1205						1210					1215			
Ser	His	Tyr	Leu	Gln	Asn	Ser	Lys	Arg	Lys	Ser	Arg	Pro	Val	Ser
1220						1225					1230			
Val	Lys	Thr	Phe	Glu	Asp	Ile	Pro	Leu	Glu	Glu	Pro	Glu	Val	Lys
1235						1240					1245			
Val	Ile	Pro	Asp	Asp	Ser	Gln	Thr	Asp	Ser	Gly	Met	Val	Leu	Ala
1250						1255					1260			
Ser	Glu	Glu	Leu	Lys	Thr	Leu	Glu	Asp	Arg	Asn	Lys	Leu	Ser	Pro
1265						1270					1275			
Ser	Phe	Gly	Gly	Met	Met	Pro	Ser	Lys	Ser	Arg	Glu	Ser	Val	Ala
1280						1285					1290			
Ser	Glu	Gly	Ser	Asn	Gln	Thr	Ser	Gly	Tyr	Gln	Ser	Gly	Tyr	His
1295						1300					1305			
Ser	Asp	Asp	Thr	Asp	Thr	Thr	Val	Tyr	Ser	Ser	Asp	Glu	Ala	Gly
1310						1315					1320			
Leu	Leu	Lys	Met	Val	Asp	Ala	Ala	Val	His	Ala	Asp	Ser	Gly	Thr
1325						1330					1335			
Thr	Leu	Gln	Leu	Thr	Ser	Cys	Leu	Asn	Gly	Ser	Gly	Pro	Val	Pro
1340						1345					1350			
Ala	Pro	Pro	Pro	Thr	Pro	Gly	Asn	His	Glu	Arg	Gly	Ala	Ala	
1355						1360					1365			

<210> 3  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide

<400> 3  
 gtcatggatc ttcgttaa 18

<210> 4  
 <211> 33  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide

<400> 4  
 ttgtacaagt ataagtagta gcccaggtac cag 33

<210> 5  
 <211> 806  
 <212> PRT  
 <213> Mus musculus

<400> 5  
 Met Glu Ser Lys Ala Leu Leu Ala Val Ala Leu Trp Phe Cys Val Glu  
 1 5 10 15

Thr Arg Ala Ala Ser Val Gly Leu Thr Gly Asp Phe Leu His Pro Pro  
 20 25 30

Lys Leu Ser Thr Gln Lys Asp Ile Leu Thr Ile Leu Ala Asn Thr Thr  
 35 40 45

Leu Gln Ile Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro  
 50 55 60

Asn Ala Gln Arg Asp Ser Glu Glu Arg Val Leu Val Thr Glu Cys Gly  
 65 70 75 80

Gly Gly Asp Ser Ile Phe Cys Lys Thr Leu Thr Ile Pro Arg Val Val  
 85 90 95

Gly Asn Asp Thr Gly Ala Tyr Lys Cys Ser Tyr Arg Asp Val Asp Ile  
 100 105 110

Ala Ser Thr Val Tyr Val Tyr Val Arg Asp Tyr Arg Ser Pro Phe Ile  
 115 120 125

Ala Ser Val Ser Asp Gln His Gly Ile Val Tyr Ile Thr Glu Asn Lys  
 130 135 140

Asn Lys Thr Val Val Ile Pro Cys Arg Gly Ser Ile Ser Asn Leu Asn  
 145 150 155 160

Val Ser Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly  
 165 170 175

Asn Arg Ile Ser Trp Asp Ser Glu Ile Gly Phe Thr Leu Pro Ser Tyr  
 180 185 190

Met Ile Ser Tyr Ala Gly Met Val Phe Cys Glu Ala Lys Ile Asn Asp  
 195 200 205

Glu Thr Tyr Gln Ser Ile Met Tyr Ile Val Val Val Val Gly Tyr Arg  
 210 215 220

Ile Tyr Asp Val Ile Leu Ser Pro Pro His Glu Ile Glu Leu Ser Ala  
 225 230 235 240

Gly Glu Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val  
 245 250 255

Gly Leu Asp Phe Thr Trp His Ser Pro Pro Ser Lys Ser His His Lys  
 260 265 270

Lys Ile Val Asn Arg Asp Val Lys Pro Phe Pro Gly Thr Val Ala Lys  
 275 280 285

Met Phe Leu Ser Thr Leu Thr Ile Glu Ser Val Thr Lys Ser Asp Gln  
 290 295 300

Gly Glu Tyr Thr Cys Val Ala Ser Ser Gly Arg Met Ile Lys Arg Asn  
 305 310 315 320

Arg Thr Phe Val Arg Val His Thr Lys Pro Phe Ile Ala Phe Gly Ser  
 325 330 335



Gly Met Lys Ser Leu Val Glu Ala Thr Val Gly Ser Gln Val Arg Ile  
 340 345 350

Pro Val Lys Tyr Leu Ser Tyr Pro Ala Pro Asp Ile Lys Trp Tyr Arg  
 355 360 365

Asn Gly Arg Pro Ile Glu Ser Asn Tyr Thr Met Ile Val Gly Asp Glu  
 370 375 380

Leu Thr Ile Met Glu Val Thr Glu Arg Asp Ala Gly Asn Tyr Thr Val  
 385 390 395 400

Ile Leu Thr Asn Pro Ile Ser Met Glu Lys Gln Ser His Met Val Ser  
 405 410 415

Leu Val Val Asn Val Pro Pro Gln Ile Gly Glu Lys Ala Leu Ile Ser  
 420 425 430

Pro Met Asp Ser Tyr Gln Tyr Gly Thr Met Gln Thr Leu Thr Cys Thr  
 435 440 445

Val Tyr Ala Asn Pro Pro Leu His His Ile Gln Trp Tyr Trp Gln Leu  
 450 455 460

Glu Glu Ala Cys Ser Tyr Arg Pro Gly Gln Thr Ser Pro Tyr Ala Cys  
 465 470 475 480

Lys Glu Trp Arg His Val Glu Asp Phe Gln Gly Gly Asn Lys Ile Glu  
 485 490 495

Val Thr Lys Asn Gln Tyr Ala Leu Ile Glu Gly Lys Asn Lys Thr Val  
 500 505 510

Ser Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr Lys Cys  
 515 520 525

Glu Ala Ile Asn Lys Ala Gly Arg Gly Glu Arg Val Ile Ser Phe His  
 530 535 540

Val Ile Arg Gly Pro Glu Ile Thr Val Gln Pro Ala Ala Gln Pro Thr  
 545 550 555 560

Glu Gln Glu Ser Val Ser Leu Leu Cys Thr Ala Asp Arg Asn Thr Phe  
 565 570 575

Glu Asn Leu Thr Trp Tyr Lys Leu Gly Ser Gln Ala Thr Ser Val His  
                   580                  585                  590

Met Gly Glu Ser Leu Thr Pro Val Cys Lys Asn Leu Asp Ala Leu Trp  
           595                  600                  605

Lys Leu Asn Gly Thr Met Phe Ser Asn Ser Thr Asn Asp Ile Leu Ile  
       610                  615                  620

Val Ala Phe Gln Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr Val Cys  
 625                  630                  635                  640

Ser Ala Gln Asp Lys Lys Thr Lys Lys Arg His Cys Leu Val Lys Gln  
                   645                  650                  655

Leu Ile Ile Leu Glu Arg Met Ala Pro Met Ile Thr Gly Asn Leu Glu  
           660                  665                  670

Asn Gln Thr Thr Thr Ile Gly Glu Thr Ile Glu Val Thr Cys Pro Ala  
           675                  680                  685

Ser Gly Asn Pro Thr Pro His Ile Thr Trp Phe Lys Asp Asn Glu Thr  
       690                  695                  700

Leu Val Glu Asp Ser Gly Ile Val Leu Arg Asp Gly Asn Arg Asn Leu  
 705                  710                  715                  720

Thr Ile Arg Arg Val Arg Lys Glu Asp Gly Gly Leu Tyr Thr Cys Gln  
           725                  730                  735

Ala Cys Asn Val Leu Gly Cys Ala Arg Ala Glu Thr Leu Phe Ile Ile  
           740                  745                  750

Glu Gly Ala Gln Glu Lys Thr Asn Leu Glu Val Ile Ile Leu Val Gly  
       755                  760                  765

Thr Ala Val Ile Ala Met Phe Phe Trp Leu Leu Leu Val Ile Val Leu  
       770                  775                  780

Arg Thr Val Lys Arg Ala Asn Glu Gly Glu Leu Lys Thr Gly Tyr Leu  
 785                  790                  795                  800

Ser Ile Val Met Asp Pro  
805

<210> 6  
<211> 180  
<212> PRT  
<213> Mus musculus

<400> 6  
Ile Leu Ile His Ile Gly His His Leu Asn Val Val Asn Leu Leu Gly  
1 5 10 15

Ala Cys Thr Lys Pro Gly Gly Pro Leu Met Val Ile Val Glu Phe Cys  
20 25 30

Lys Phe Gly Asn Leu Ser Thr Tyr Leu Arg Gly Lys Arg Asn Glu Phe  
35 40 45

Val Pro Tyr Lys Ser Lys Gly Ala Arg Phe Arg Gln Gly Lys Asp Tyr  
50 55 60

Val Gly Glu Leu Ser Val Asp Leu Lys Arg Arg Leu Asp Ser Ile Thr  
65 70 75 80

Ser Ser Gln Ser Ser Ala Ser Ser Gly Phe Val Glu Glu Lys Ser Leu  
85 90 95

Ser Asp Val Glu Glu Glu Glu Ala Ser Glu Glu Leu Tyr Lys Asp Phe  
100 105 110

Leu Thr Leu Glu His Leu Ile Cys Tyr Ser Phe Gln Val Ala Lys Gly  
115 120 125

Met Glu Phe Leu Ala Ser Arg Lys Cys Ile His Arg Asp Leu Ala Ala  
130 135 140

Arg Asn Ile Leu Leu Ser Glu Lys Asn Val Val Lys Ile Cys Asp Phe  
145 150 155 160

Gly Leu Ala Arg Asp Ile Tyr Lys Asp Pro Asp Tyr Val Arg Lys Gly  
165 170 175

Asp Ala Arg Leu  
180

```
<220>
<221> CDS
<222> (210)..(4244)
```

<400> 7																
ctgtgtccccg	cagccgggat	aacctggctg	acccgattcc	gcggacaccg	ctgacagccg											60
cggctggagc	cagggcgccg	gtgccccgcg	ctctccccg	tcttgcgctg	cgggggccat											120
accgcctctg	tgacttcttt	gcggggccagg	gacggagaag	gagtctgtgc	ctgagaaact											180
gggctctgtg	cccaggcgcg	aggtgcagg	atg	gag	agc	aag	gcg	ctg	cta	gct						233
			Met	Glu	Ser	Lys	Ala	Leu	Leu	Ala						
			1				5									
gtc	gct	ctg	tgg	ttc	tgc	gtg	gag	acc	cga	gcc	gcc	tct	gtg	ggg	ttg	281
Val	Ala	Leu	Trp	Phe	Cys	Val	Glu	Thr	Arg	Ala	Ala	Ser	Val	Gly	Leu	
	10					15					20					
act	ggc	gat	ttt	ctc	cat	ccc	ccc	aag	ctc	agc	aca	cag	aaa	gac	ata	329
Thr	Gly	Asp	Phe	Leu	His	Pro	Pro	Lys	Leu	Ser	Thr	Gln	Lys	Asp	Ile	
25					30					35					40	
ctg	aca	att	ttg	gca	aat	aca	acc	ctt	cag	att	act	tgc	agg	gga	cag	377
Leu	Thr	Ile	Leu	Ala	Asn	Thr	Thr	Leu	Gln	Ile	Thr	Cys	Arg	Gly	Gln	
				45					50					55		
cgg	gac	ctg	gac	tgg	ctt	tgg	ccc	aat	gct	cag	cgt	gat	tct	gag	gaa	425
Arg	Asp	Leu	Asp	Trp	Leu	Trp	Pro	Asn	Ala	Gln	Arg	Asp	Ser	Glu	Glu	
			60					65					70			
agg	gta	ttg	gtg	act	gaa	tgc	ggc	ggg	ggg	gac	agt	atc	ttc	tgc	aaa	473
Arg	Val	Leu	Val	Thr	Glu	Cys	Gly	Gly	Gly	Asp	Ser	Ile	Phe	Cys	Lys	
		75					80					85				
aca	ctc	acc	att	ccc	agg	gtg	gtt	gga	aat	gat	act	gga	gcc	tac	aag	521
Thr	Leu	Thr	Ile	Pro	Arg	Val	Val	Gly	Asn	Asp	Thr	Gly	Ala	Tyr	Lys	
	90					95					100					
tgc	tcg	tac	cgg	gac	gtc	gac	ata	gcc	tcc	act	gtt	tat	gtc	tat	gtt	569
Cys	Ser	Tyr	Arg	Asp	Val	Asp	Ile	Ala	Ser	Thr	Val	Tyr	Val	Tyr	Val	
105					110					115					120	
cga	gat	tac	aga	tca	cca	ttc	atc	gcc	tct	gtc	agt	gac	cag	cat	ggc	617
Arg	Asp	Tyr	Arg	Ser	Pro	Phe	Ile	Ala	Ser	Val	Ser	Asp	Gln	His	Gly	
				125					130					135		
atc	gtg	tac	atc	acc	gag	aac	aag	aac	aaa	act	gtg	gtg	atc	ccc	tgc	665
Ile	Val	Tyr	Ile	Thr	Glu	Asn	Lys	Asn	Lys	Thr	Val	Val	Ile	Pro	Cys	
			140					145					150			

cga ggg tcg att tca aac ctc aat gtg tct ctt tgc gct agg tat cca	713
Arg Gly Ser Ile Ser Asn Leu Asn Val Ser Leu Cys Ala Arg Tyr Pro	
155 160 165	
gaa aag aga ttt gtt ccg gat gga aac aga att tcc tgg gac agc gag	761
Glu Lys Arg Phe Val Pro Asp Gly Asn Arg Ile Ser Trp Asp Ser Glu	
170 175 180	
ata ggc ttt act ctc ccc agt tac atg atc agc tat gcc ggc atg gtc	809
Ile Gly Phe Thr Leu Pro Ser Tyr Met Ile Ser Tyr Ala Gly Met Val	
185 190 195 200	
ttc tgt gag gca aag atc aat gat gaa acc tat cag tct atc atg tac	857
Phe Cys Glu Ala Lys Ile Asn Asp Glu Thr Tyr Gln Ser Ile Met Tyr	
205 210 215	
ata gtt gtg gtt gta gga tat agg att tat gat gtg att ctg agc ccc	905
Ile Val Val Val Val Gly Tyr Arg Ile Tyr Asp Val Ile Leu Ser Pro	
220 225 230	
ccg cat gaa att gag cta tct gcc gga gaa aaa ctt gtc tta aat tgt	953
Pro His Glu Ile Glu Leu Ser Ala Gly Glu Lys Leu Val Leu Asn Cys	
235 240 245	
aca gcg aga aca gag ctc aat gtg ggg ctt gat ttc acc tgg cac tct	1001
Thr Ala Arg Thr Glu Leu Asn Val Gly Leu Asp Phe Thr Trp His Ser	
250 255 260	
cca cct tca aag tct cat cat aag aag att gta aac cgg gat gtg aaa	1049
Pro Pro Ser Lys Ser His His Lys Lys Ile Val Asn Arg Asp Val Lys	
265 270 275 280	
ccc ttt cct ggg act gtg gcg aag atg ttt ttg agc acc ttg aca ata	1097
Pro Phe Pro Gly Thr Val Ala Lys Met Phe Leu Ser Thr Leu Thr Ile	
285 290 295	
gaa agt gtg acc aag agt gac caa ggg gaa tac acc tgt gta gcg tcc	1145
Glu Ser Val Thr Lys Ser Asp Gln Gly Glu Tyr Thr Cys Val Ala Ser	
300 305 310	
agt gga cgg atg atc aag aga aat aga aca ttt gtc cga gtt cac aca	1193
Ser Gly Arg Met Ile Lys Arg Asn Arg Thr Phe Val Arg Val His Thr	
315 320 325	
aag cct ttt att gct ttc ggt agt ggg atg aaa tct ttg gtg gaa gcc	1241
Lys Pro Phe Ile Ala Phe Gly Ser Gly Met Lys Ser Leu Val Glu Ala	
330 335 340	
aca gtg ggc agt caa gtc cga atc cct gtg aag tat ctc agt tac cca	1289
Thr Val Gly Ser Gln Val Arg Ile Pro Val Lys Tyr Leu Ser Tyr Pro	
345 350 355 360	
gct cct gat atc aaa tgg tac aga aat gga agg ccc att gag tcc aac	1337
Ala Pro Asp Ile Lys Trp Tyr Arg Asn Gly Arg Pro Ile Glu Ser Asn	
365 370 375	

tac aca atg att gtt ggc gat gaa ctc acc atc atg gaa gtg act gaa	1385
Tyr Thr Met Ile Val Gly Asp Glu Leu Thr Ile Met Glu Val Thr Glu	
380 385 390	
aga gat gca gga aac tac acg gtc atc ctc acc aac ccc att tca atg	1433
Arg Asp Ala Gly Asn Tyr Thr Val Ile Leu Thr Asn Pro Ile Ser Met	
395 400 405	
gag aaa cag agc cac atg gtc tct ctg gtt gtg aat gtc cca ccc cag	1481
Glu Lys Gln Ser His Met Val Ser Leu Val Val Asn Val Pro Pro Gln	
410 415 420	
atc ggt gag aaa gcc ttg atc tcg cct atg gat tcc tac cag tat ggg	1529
Ile Gly Glu Lys Ala Leu Ile Ser Pro Met Asp Ser Tyr Gln Tyr Gly	
425 430 435 440	
acc atg cag aca ttg aca tgc aca gtc tac gcc aac cct ccc ctg cac	1577
Thr Met Gln Thr Leu Thr Cys Thr Val Tyr Ala Asn Pro Pro Leu His	
445 450 455	
cac atc cag tgg tac tgg cag cta gaa gaa gcc tgc tcc tac aga ccc	1625
His Ile Gln Trp Tyr Trp Gln Leu Glu Glu Ala Cys Ser Tyr Arg Pro	
460 465 470	
ggc caa aca agc ccg tat gct tgt aaa gaa tgg aga cac gtg gag gat	1673
Gly Gln Thr Ser Pro Tyr Ala Cys Lys Glu Trp Arg His Val Glu Asp	
475 480 485	
ttc cag ggg gga aac aag atc gaa gtc acc aaa aac caa tat gcc ctg	1721
Phe Gln Gly Gly Asn Lys Ile Glu Val Thr Lys Asn Gln Tyr Ala Leu	
490 495 500	
att gaa gga aaa aac aaa act gta agt acg ctg gtc atc caa gct gcc	1769
Ile Glu Gly Lys Asn Lys Thr Val Ser Thr Leu Val Ile Gln Ala Ala	
505 510 515 520	
aac gtg tca gcg ttg tac aaa tgt gaa gcc atc aac aaa gcg gga cga	1817
Asn Val Ser Ala Leu Tyr Lys Cys Glu Ala Ile Asn Lys Ala Gly Arg	
525 530 535	
gga gag agg gtc atc tcc ttc cat gtg atc agg ggt cct gaa att act	1865
Gly Glu Arg Val Ile Ser Phe His Val Ile Arg Gly Pro Glu Ile Thr	
540 545 550	
gtg caa cct gct gcc cag cca act gag cag gag agt gtg tcc ctg ttg	1913
Val Gln Pro Ala Ala Gln Pro Thr Glu Gln Glu Ser Val Ser Leu Leu	
555 560 565	
tgc act gca gac aga aat acg ttt gag aac ctc acg tgg tac aag ctt	1961
Cys Thr Ala Asp Arg Asn Thr Phe Glu Asn Leu Thr Trp Tyr Lys Leu	
570 575 580	
ggc tca cag gca aca tcg gtc cac atg ggc gaa tca ctc aca cca gtt	2009
Gly Ser Gln Ala Thr Ser Val His Met Gly Glu Ser Leu Thr Pro Val	
585 590 595 600	

tgc aag aac ttg gat gct ctt tgg aaa ctg aat ggc acc atg ttt tct	2057
Cys Lys Asn Leu Asp Ala Leu Trp Lys Leu Asn Gly Thr Met Phe Ser	
605 610 615	
aac agc aca aat gac atc ttg att gtg gca ttt cag aat gcc tct ctg	2105
Asn Ser Thr Asn Asp Ile Leu Ile Val Ala Phe Gln Asn Ala Ser Leu	
620 625 630	
cag gac caa ggc gac tat gtt tgc tct gct caa gat aag aag acc aag	2153
Gln Asp Gln Gly Asp Tyr Val Cys Ser Ala Gln Asp Lys Lys Thr Lys	
635 640 645	
aaa aga cat tgc ctg gtc aaa cag ctc atc atc cta gag cgc atg gca	2201
Lys Arg His Cys Leu Val Lys Gln Leu Ile Ile Leu Glu Arg Met Ala	
650 655 660	
ccc atg atc acc gga aat ctg gag aat cag aca aca acc att ggc gag	2249
Pro Met Ile Thr Gly Asn Leu Glu Asn Gln Thr Thr Thr Ile Gly Glu	
665 670 675 680	
acc att gaa gtg act tgc cca gca tct gga aat cct acc cca cac att	2297
Thr Ile Glu Val Thr Cys Pro Ala Ser Gly Asn Pro Thr Pro His Ile	
685 690 695	
aca tgg ttc aaa gac aac gag acc ctg gta gaa gat tca ggc att gta	2345
Thr Trp Phe Lys Asp Asn Glu Thr Leu Val Glu Asp Ser Gly Ile Val	
700 705 710	
ctg aga gat ggg aac cgg aac ctg act atc cgc agg gtg agg aag gag	2393
Leu Arg Asp Gly Asn Arg Asn Leu Thr Ile Arg Arg Val Arg Lys Glu	
715 720 725	
gat gga ggc ctc tac acc tgc cag gcc tgc aat gtc ctt ggc tgt gca	2441
Asp Gly Gly Leu Tyr Thr Cys Gln Ala Cys Asn Val Leu Gly Cys Ala	
730 735 740	
aga gcg gag acg ctc ttc ata ata gaa ggt gcc cag gaa aag acc aac	2489
Arg Ala Glu Thr Leu Phe Ile Ile Glu Gly Ala Gln Glu Lys Thr Asn	
745 750 755 760	
ttg gaa gtc att atc ctc gtc ggc act gca gtg att gcc atg ttc ttc	2537
Leu Glu Val Ile Ile Leu Val Gly Thr Ala Val Ile Ala Met Phe Phe	
765 770 775	
tgg ctc ctt ctt gtc att gtc cta cgg acc gtt aag cgg gcc aat gaa	2585
Trp Leu Leu Leu Val Ile Val Leu Arg Thr Val Lys Arg Ala Asn Glu	
780 785 790	
ggg gaa ctg aag aca ggc tac ttg tct att gtc atg gat cca gat gaa	2633
Gly Glu Leu Lys Thr Gly Tyr Leu Ser Ile Val Met Asp Pro Asp Glu	
795 800 805	
ttg ccc ttg gat gag cgc tgt gaa cgc ttg cct tat gat gcc agc aag	2681
Leu Pro Leu Asp Glu Arg Cys Glu Arg Leu Pro Tyr Asp Ala Ser Lys	
810 815 820	

tgg gaa ttc ccc agg gac cgg ctg aaa cta gga aaa cct ctt ggc cgc	2729
Trp Glu Phe Pro Arg Asp Arg Leu Lys Leu Gly Lys Pro Leu Gly Arg	
825 830 835 840	
ggt gcc ttc ggc caa gtg att gag gca gac gct ttt gga att gac aag	2777
Gly Ala Phe Gly Gln Val Ile Glu Ala Asp Ala Phe Gly Ile Asp Lys	
845 850 855	
aca gcg act tgc aaa aca gta gcc gtc aag atg ttg aaa gaa gga gca	2825
Thr Ala Thr Cys Lys Thr Val Ala Val Lys Met Leu Lys Glu Gly Ala	
860 865 870	
aca cac agc gag cat cga gcc ctc atg tct gaa ctc aag atc ctc atc	2873
Thr His Ser Glu His Arg Ala Leu Met Ser Glu Leu Lys Ile Leu Ile	
875 880 885	
cac att ggt cac cat ctc aat gtg gtg aac ctc cta ggc gcc tgc acc	2921
His Ile Gly His His Leu Asn Val Val Asn Leu Leu Gly Ala Cys Thr	
890 895 900	
aag ccg gga ggg cct ctc atg gtg att ctg caa ttc tcg aag ttt gga	2969
Lys Pro Gly Gly Pro Leu Met Val Ile Leu Gln Phe Ser Lys Phe Gly	
905 910 915 920	
aac cta tca act tac tta cgg ggc aag aga aat gaa ttt gtt ccc tat	3017
Asn Leu Ser Thr Tyr Leu Arg Gly Lys Arg Asn Glu Phe Val Pro Tyr	
925 930 935	
aag agc aaa ggg gca cgc ttc cgc cag ggc aag gac tac gtt ggg gag	3065
Lys Ser Lys Gly Ala Arg Phe Arg Gln Gly Lys Asp Tyr Val Gly Glu	
940 945 950	
ctc tcc gtg gat ctg aaa aga cgc ttg gac agc atc acc agc agc cag	3113
Leu Ser Val Asp Leu Lys Arg Arg Leu Asp Ser Ile Thr Ser Ser Gln	
955 960 965	
agc tct gcc agc tca ggc ttt gtt gag gag aaa tcg ctc agt gat gta	3161
Ser Ser Ala Ser Ser Gly Phe Val Glu Glu Lys Ser Leu Ser Asp Val	
970 975 980	
gag gaa gaa gaa gct tct gaa gaa ctg tac aag gac ttc ctg acc ttg	3209
Glu Glu Glu Glu Ala Ser Glu Glu Leu Tyr Lys Asp Phe Leu Thr Leu	
985 990 995 1000	
gag cat ctc atc tgt tac agc ttc caa gtg gct aag ggc atg gag	3254
Glu His Leu Ile Cys Tyr Ser Phe Gln Val Ala Lys Gly Met Glu	
1005 1010 1015	
ttc ttg gca tca agg aag tgt atc cac agg gac ctg gca gca cga	3299
Phe Leu Ala Ser Arg Lys Cys Ile His Arg Asp Leu Ala Ala Arg	
1020 1025 1030	
aac att ctc cta tcg gag aag aat gtg gtt aag atc tgt gac ttc	3344
Asn Ile Leu Leu Ser Glu Lys Asn Val Val Lys Ile Cys Asp Phe	
1035 1040 1045	



ggc ttg gcc cgg gac	att tat aaa gac ccg	gat tat gtc aga aaa	3389
Gly Leu Ala Arg Asp	Ile Tyr Lys Asp Pro	Asp Tyr Val Arg Lys	
	1050	1055 1060	
gga gat gcc cga ctc	cct ttg aag tgg atg	gcc ccg gaa acc att	3434
Gly Asp Ala Arg Leu	Pro Leu Lys Trp Met	Ala Pro Glu Thr Ile	
	1065	1070 1075	
ttt gac aga gta tac	aca att cag agc gat	gtg tgg tct ttc ggt	3479
Phe Asp Arg Val Tyr	Thr Ile Gln Ser Asp	Val Trp Ser Phe Gly	
	1080	1085 1090	
gtg ttg ctc tgg gaa	ata ttt tcc tta ggt	gcc tcc cca tac cct	3524
Val Leu Leu Trp Glu	Ile Phe Ser Leu Gly	Ala Ser Pro Tyr Pro	
	1095	1100 1105	
ggg gtc aag att gat	gaa gaa ttt tgt agg	aga ttg aaa gaa gga	3569
Gly Val Lys Ile Asp	Glu Glu Phe Cys Arg	Arg Leu Lys Glu Gly	
	1110	1115 1120	
act aga atg cgg gct	cct gac tac act acc	cca gaa atg tac cag	3614
Thr Arg Met Arg Ala	Pro Asp Tyr Thr Thr	Pro Glu Met Tyr Gln	
	1125	1130 1135	
acc atg ctg gac tgc	tgg cat gag gac ccc	aac cag aga ccc tcg	3659
Thr Met Leu Asp Cys	Trp His Glu Asp Pro	Asn Gln Arg Pro Ser	
	1140	1145 1150	
ttt tca gag ttg gtg	gag cat ttg gga aac	ctc ctg caa gca aat	3704
Phe Ser Glu Leu Val	Glu His Leu Gly Asn	Leu Leu Gln Ala Asn	
	1155	1160 1165	
gcg cag cag gat ggc	aaa gac tat att gtt	ctt cca atg tca gag	3749
Ala Gln Gln Asp Gly	Lys Asp Tyr Ile Val	Leu Pro Met Ser Glu	
	1170	1175 1180	
aca ctg agc atg gaa	gag gat tct gga ctc	tcc ctg cct acc tca	3794
Thr Leu Ser Met Glu	Glu Asp Ser Gly Leu	Ser Leu Pro Thr Ser	
	1185	1190 1195	
cct gtt tcc tgt atg	gag gaa gag gaa gtg	tgc gac ccc aaa ttc	3839
Pro Val Ser Cys Met	Glu Glu Glu Glu Val	Cys Asp Pro Lys Phe	
	1200	1205 1210	
cat tat gac aac aca	gca gga atc agt cat	tat ctc cag aac agt	3884
His Tyr Asp Asn Thr	Ala Gly Ile Ser His	Tyr Leu Gln Asn Ser	
	1215	1220 1225	
aag cga aag agc cgg	cca gtg agt gta aaa	aca ttt gaa gat atc	3929
Lys Arg Lys Ser Arg	Pro Val Ser Val Lys	Thr Phe Glu Asp Ile	
	1230	1235 1240	
cca ttg gag gaa cca	gaa gta aaa gtg atc	cca gat gac agc cag	3974
Pro Leu Glu Glu Pro	Glu Val Lys Val Ile	Pro Asp Asp Ser Gln	
	1245	1250 1255	

aca gac agt ggg atg gtc ctt gca tca gaa gag ctg aaa act ctg	4019
Thr Asp Ser Gly Met Val Leu Ala Ser Glu Glu Leu Lys Thr Leu	
1260 1265 1270	
gaa gac agg aac aaa tta tct cca tct ttt ggt gga atg atg ccc	4064
Glu Asp Arg Asn Lys Leu Ser Pro Ser Phe Gly Gly Met Met Pro	
1275 1280 1285	
agt aaa agc agg gag tct gtg gcc tcg gaa ggc tcc aac cag acc	4109
Ser Lys Ser Arg Glu Ser Val Ala Ser Glu Gly Ser Asn Gln Thr	
1290 1295 1300	
agt ggc tac cag tct ggg tat cac tca gat gac aca gac acc acc	4154
Ser Gly Tyr Gln Ser Gly Tyr His Ser Asp Asp Thr Asp Thr Thr	
1305 1310 1315	
gtg tac tcc agc gac gag gca gga ctt tta aag atg gtg gat gct	4199
Val Tyr Ser Ser Asp Glu Ala Gly Leu Leu Lys Met Val Asp Ala	
1320 1325 1330	
gca gtt cac gct gac tca ggg acc aca ctg agc tca cct cct gtt	4244
Ala Val His Ala Asp Ser Gly Thr Thr Leu Ser Ser Pro Pro Val	
1335 1340 1345	
taaatggaag tggctcctgtc ccggctccgc ccccaactcc tggaaatcac gagagaggtg	4304
ctgcttagat tttcaagtgt tgttctttcc accaccogga agtagccaca tttgattttc	4364
atTTTTggag gagggacctc agactgcaag gagcttgtcc tcagggcatt tccagagaag	4424
atgccccatga cccaagaatg tgttgactct actctctttt ccattcattt aaaagtccta	4484
tataatgtgc cctgctgtgg tctcactacc agttaaagca aaagactttc aaacacgtgg	4544
actctgtcct ccaagaagtg gcaacggcac ctctgtgaaa ctggatcgaa tgggcaatgc	4604
tttgtgtgtt gaggatgggt gagatgtccc agggccgagt ctgtctacct tggaggcttt	4664
gtggaggatg cgggctatga gccaaagtgt aagtgtggga tgtggactgg gaggaaggaa	4724
ggcgcaagcc gtccggagag cggttggagc ctgcagatgc attgtgctgg ctctgggtgga	4784
ggtgggcttg tggcctgtca ggaaacgcaa aggcggccgg cagggttttg ttttggaaag	4844
tttgctgtct cttcacagtc gggttacagg cgagttccct gtggcgtttc ctactcctaa	4904
tgagagttcc ttccggactc ttacgtgtct cctggcctgg cccaggaag gaaatgatgc	4964
agcttgctcc ttctcatct ctcaggctgt gccttaattc agaacaccaa aagagaggaa	5024
cgtcggcaga ggctcctgac ggggccgaag aattgtgaga acagaacaga aactcagggt	5084
ttctgctggg tggagaccca cgtggcgccc tgggtggcagg tctgagggtt ctctgtcaag	5144
tggcggtaaa ggctcaggct ggtgttcttc ctctatctcc actcctgtca ggcccccaag	5204
tcctcagtat ttagcttttg tggcttctctg atggcagaaa aatcttaatt ggttggtttg	5264

ctctccagat aatcactagc cagatttcga aattactttt tagccgaggt tatgataaca 5324

tctactgtat cctttagaat tttaacctat aaaactatgt ctactggttt ctgcctgtgt 5384

gcttatgtt 5393

<210> 8

<211> 1345

<212> PRT

<213> Mus sp.

<400> 8

Met Glu Ser Lys Ala Leu Leu Ala Val Ala Leu Trp Phe Cys Val Glu  
1 5 10 15

Thr Arg Ala Ala Ser Val Gly Leu Thr Gly Asp Phe Leu His Pro Pro  
20 25 30

Lys Leu Ser Thr Gln Lys Asp Ile Leu Thr Ile Leu Ala Asn Thr Thr  
35 40 45

Leu Gln Ile Thr Cys Arg Gly Gln Arg Asp Leu Asp Trp Leu Trp Pro  
50 55 60

Asn Ala Gln Arg Asp Ser Glu Glu Arg Val Leu Val Thr Glu Cys Gly  
65 70 75 80

Gly Gly Asp Ser Ile Phe Cys Lys Thr Leu Thr Ile Pro Arg Val Val  
85 90 95

Gly Asn Asp Thr Gly Ala Tyr Lys Cys Ser Tyr Arg Asp Val Asp Ile  
100 105 110

Ala Ser Thr Val Tyr Val Tyr Val Arg Asp Tyr Arg Ser Pro Phe Ile  
115 120 125

Ala Ser Val Ser Asp Gln His Gly Ile Val Tyr Ile Thr Glu Asn Lys  
130 135 140

Asn Lys Thr Val Val Ile Pro Cys Arg Gly Ser Ile Ser Asn Leu Asn  
145 150 155 160

Val Ser Leu Cys Ala Arg Tyr Pro Glu Lys Arg Phe Val Pro Asp Gly  
165 170 175

Asn	Arg	Ile	Ser	Trp	Asp	Ser	Glu	Ile	Gly	Phe	Thr	Leu	Pro	Ser	Tyr	180	185	190
Met	Ile	Ser	Tyr	Ala	Gly	Met	Val	Phe	Cys	Glu	Ala	Lys	Ile	Asn	Asp	195	200	205
Glu	Thr	Tyr	Gln	Ser	Ile	Met	Tyr	Ile	Val	Val	Val	Val	Gly	Tyr	Arg	210	215	220
Ile	Tyr	Asp	Val	Ile	Leu	Ser	Pro	Pro	His	Glu	Ile	Glu	Leu	Ser	Ala	225	230	235
Gly	Glu	Lys	Leu	Val	Leu	Asn	Cys	Thr	Ala	Arg	Thr	Glu	Leu	Asn	Val	245	250	255
Gly	Leu	Asp	Phe	Thr	Trp	His	Ser	Pro	Pro	Ser	Lys	Ser	His	His	Lys	260	265	270
Lys	Ile	Val	Asn	Arg	Asp	Val	Lys	Pro	Phe	Pro	Gly	Thr	Val	Ala	Lys	275	280	285
Met	Phe	Leu	Ser	Thr	Leu	Thr	Ile	Glu	Ser	Val	Thr	Lys	Ser	Asp	Gln	290	295	300
Gly	Glu	Tyr	Thr	Cys	Val	Ala	Ser	Ser	Gly	Arg	Met	Ile	Lys	Arg	Asn	305	310	315
Arg	Thr	Phe	Val	Arg	Val	His	Thr	Lys	Pro	Phe	Ile	Ala	Phe	Gly	Ser	325	330	335
Gly	Met	Lys	Ser	Leu	Val	Glu	Ala	Thr	Val	Gly	Ser	Gln	Val	Arg	Ile	340	345	350
Pro	Val	Lys	Tyr	Leu	Ser	Tyr	Pro	Ala	Pro	Asp	Ile	Lys	Trp	Tyr	Arg	355	360	365
Asn	Gly	Arg	Pro	Ile	Glu	Ser	Asn	Tyr	Thr	Met	Ile	Val	Gly	Asp	Glu	370	375	380
Leu	Thr	Ile	Met	Glu	Val	Thr	Glu	Arg	Asp	Ala	Gly	Asn	Tyr	Thr	Val	385	390	395
Ile	Leu	Thr	Asn	Pro	Ile	Ser	Met	Glu	Lys	Gln	Ser	His	Met	Val	Ser	405	410	415

Leu Val Val Asn Val Pro Pro Gln Ile Gly Glu Lys Ala Leu Ile Ser  
 420 425 430

Pro Met Asp Ser Tyr Gln Tyr Gly Thr Met Gln Thr Leu Thr Cys Thr  
 435 440 445

Val Tyr Ala Asn Pro Pro Leu His His Ile Gln Trp Tyr Trp Gln Leu  
 450 455 460

Glu Glu Ala Cys Ser Tyr Arg Pro Gly Gln Thr Ser Pro Tyr Ala Cys  
 465 470 475 480

Lys Glu Trp Arg His Val Glu Asp Phe Gln Gly Gly Asn Lys Ile Glu  
 485 490 495

Val Thr Lys Asn Gln Tyr Ala Leu Ile Glu Gly Lys Asn Lys Thr Val  
 500 505 510

Ser Thr Leu Val Ile Gln Ala Ala Asn Val Ser Ala Leu Tyr Lys Cys  
 515 520 525

Glu Ala Ile Asn Lys Ala Gly Arg Gly Glu Arg Val Ile Ser Phe His  
 530 535 540

Val Ile Arg Gly Pro Glu Ile Thr Val Gln Pro Ala Ala Gln Pro Thr  
 545 550 555 560

Glu Gln Glu Ser Val Ser Leu Leu Cys Thr Ala Asp Arg Asn Thr Phe  
 565 570 575

Glu Asn Leu Thr Trp Tyr Lys Leu Gly Ser Gln Ala Thr Ser Val His  
 580 585 590

Met Gly Glu Ser Leu Thr Pro Val Cys Lys Asn Leu Asp Ala Leu Trp  
 595 600 605

Lys Leu Asn Gly Thr Met Phe Ser Asn Ser Thr Asn Asp Ile Leu Ile  
 610 615 620

Val Ala Phe Gln Asn Ala Ser Leu Gln Asp Gln Gly Asp Tyr Val Cys  
 625 630 635 640

Ser Ala Gln Asp Lys Lys Thr Lys Lys Arg His Cys Leu Val Lys Gln  
645 650 655

Leu Ile Ile Leu Glu Arg Met Ala Pro Met Ile Thr Gly Asn Leu Glu  
660 665 670

Asn Gln Thr Thr Thr Ile Gly Glu Thr Ile Glu Val Thr Cys Pro Ala  
675 680 685

Ser Gly Asn Pro Thr Pro His Ile Thr Trp Phe Lys Asp Asn Glu Thr  
690 695 700

Leu Val Glu Asp Ser Gly Ile Val Leu Arg Asp Gly Asn Arg Asn Leu  
705 710 715 720

Thr Ile Arg Arg Val Arg Lys Glu Asp Gly Gly Leu Tyr Thr Cys Gln  
725 730 735

Ala Cys Asn Val Leu Gly Cys Ala Arg Ala Glu Thr Leu Phe Ile Ile  
740 745 750

Glu Gly Ala Gln Glu Lys Thr Asn Leu Glu Val Ile Ile Leu Val Gly  
755 760 765

Thr Ala Val Ile Ala Met Phe Phe Trp Leu Leu Leu Val Ile Val Leu  
770 775 780

Arg Thr Val Lys Arg Ala Asn Glu Gly Glu Leu Lys Thr Gly Tyr Leu  
785 790 795 800

Ser Ile Val Met Asp Pro Asp Glu Leu Pro Leu Asp Glu Arg Cys Glu  
805 810 815

Arg Leu Pro Tyr Asp Ala Ser Lys Trp Glu Phe Pro Arg Asp Arg Leu  
820 825 830

Lys Leu Gly Lys Pro Leu Gly Arg Gly Ala Phe Gly Gln Val Ile Glu  
835 840 845

Ala Asp Ala Phe Gly Ile Asp Lys Thr Ala Thr Cys Lys Thr Val Ala  
850 855 860

Val Lys Met Leu Lys Glu Gly Ala Thr His Ser Glu His Arg Ala Leu  
865 870 875 880

Met	Ser	Glu	Leu	Lys	Ile	Leu	Ile	His	Ile	Gly	His	His	Leu	Asn	Val
				885					890					895	
Val	Asn	Leu	Leu	Gly	Ala	Cys	Thr	Lys	Pro	Gly	Gly	Pro	Leu	Met	Val
			900					905					910		
Ile	Leu	Gln	Phe	Ser	Lys	Phe	Gly	Asn	Leu	Ser	Thr	Tyr	Leu	Arg	Gly
		915					920					925			
Lys	Arg	Asn	Glu	Phe	Val	Pro	Tyr	Lys	Ser	Lys	Gly	Ala	Arg	Phe	Arg
	930					935					940				
Gln	Gly	Lys	Asp	Tyr	Val	Gly	Glu	Leu	Ser	Val	Asp	Leu	Lys	Arg	Arg
945					950					955					960
Leu	Asp	Ser	Ile	Thr	Ser	Ser	Gln	Ser	Ser	Ala	Ser	Ser	Gly	Phe	Val
				965					970						975
Glu	Glu	Lys	Ser	Leu	Ser	Asp	Val	Glu	Glu	Glu	Glu	Ala	Ser	Glu	Glu
			980					985						990	
Leu	Tyr	Lys	Asp	Phe	Leu	Thr	Leu	Glu	His	Leu	Ile	Cys	Tyr	Ser	Phe
		995					1000					1005			
Gln	Val	Ala	Lys	Gly	Met	Glu	Phe	Leu	Ala	Ser	Arg	Lys	Cys	Ile	
	1010					1015					1020				
His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Ile	Leu	Leu	Ser	Glu	Lys	Asn	
	1025					1030					1035				
Val	Val	Lys	Ile	Cys	Asp	Phe	Gly	Leu	Ala	Arg	Asp	Ile	Tyr	Lys	
	1040					1045					1050				
Asp	Pro	Asp	Tyr	Val	Arg	Lys	Gly	Asp	Ala	Arg	Leu	Pro	Leu	Lys	
	1055					1060					1065				
Trp	Met	Ala	Pro	Glu	Thr	Ile	Phe	Asp	Arg	Val	Tyr	Thr	Ile	Gln	
	1070					1075					1080				
Ser	Asp	Val	Trp	Ser	Phe	Gly	Val	Leu	Leu	Trp	Glu	Ile	Phe	Ser	
	1085					1090					1095				

Leu Gly	Ala Ser Pro Tyr	Pro Gly Val Lys Ile Asp	Glu Glu Phe
1100		1105	1110
Cys Arg	Arg Leu Lys Glu Gly	Thr Arg Met Arg Ala	Pro Asp Tyr
1115		1120	1125
Thr Thr	Pro Glu Met Tyr Gln	Thr Met Leu Asp Cys	Trp His Glu
1130		1135	1140
Asp Pro	Asn Gln Arg Pro Ser	Phe Ser Glu Leu Val	Glu His Leu
1145		1150	1155
Gly Asn	Leu Leu Gln Ala Asn	Ala Gln Gln Asp Gly	Lys Asp Tyr
1160		1165	1170
Ile Val	Leu Pro Met Ser Glu	Thr Leu Ser Met Glu	Glu Asp Ser
1175		1180	1185
Gly Leu	Ser Leu Pro Thr Ser	Pro Val Ser Cys Met	Glu Glu Glu
1190		1195	1200
Glu Val	Cys Asp Pro Lys Phe	His Tyr Asp Asn Thr	Ala Gly Ile
1205		1210	1215
Ser His	Tyr Leu Gln Asn Ser	Lys Arg Lys Ser Arg	Pro Val Ser
1220		1225	1230
Val Lys	Thr Phe Glu Asp Ile	Pro Leu Glu Glu Pro	Glu Val Lys
1235		1240	1245
Val Ile	Pro Asp Asp Ser Gln	Thr Asp Ser Gly Met	Val Leu Ala
1250		1255	1260
Ser Glu	Glu Leu Lys Thr Leu	Glu Asp Arg Asn Lys	Leu Ser Pro
1265		1270	1275
Ser Phe	Gly Gly Met Met Pro	Ser Lys Ser Arg Glu	Ser Val Ala
1280		1285	1290
Ser Glu	Gly Ser Asn Gln Thr	Ser Gly Tyr Gln Ser	Gly Tyr His
1295		1300	1305
Ser Asp	Asp Thr Asp Thr Thr	Val Tyr Ser Ser Asp	Glu Ala Gly
1310		1315	1320



Leu Leu Lys Met Val Asp Ala Ala Val His Ala Asp Ser Gly Thr  
 1325 1330 1335

Thr Leu Ser Ser Pro Pro Val  
 1340 1345

<210> 9  
 <211> 180  
 <212> PRT  
 <213> Unknown

<220>  
 <223> Description of Unknown: FLK-1 polypeptide

<400> 9  
 Ile Leu Ile His Ile Gly His His Leu Asn Val Val Asn Leu Leu Gly  
 1 5 10 15

Ala Cys Thr Lys Pro Gly Gly Pro Leu Met Val Ile Val Glu Phe Ser  
 20 25 30

Lys Phe Gly Asn Leu Ser Thr Tyr Leu Arg Gly Lys Arg Asn Glu Phe  
 35 40 45

Val Pro Tyr Lys Ser Lys Gly Ala Arg Phe Arg Gln Gly Lys Asp Tyr  
 50 55 60

Val Gly Glu Leu Ser Val Asp Leu Lys Arg Arg Leu Asp Ser Ile Thr  
 65 70 75 80

Ser Ser Gln Ser Ser Ala Ser Ser Gly Phe Val Glu Glu Lys Ser Leu  
 85 90 95

Ser Asp Val Glu Glu Glu Glu Ala Ser Glu Glu Leu Tyr Lys Asp Phe  
 100 105 110

Leu Thr Leu Glu His Leu Ile Cys Tyr Ser Phe Gln Val Ala Lys Gly  
 115 120 125

Met Glu Phe Leu Ala Ser Arg Lys Cys Ile His Arg Asp Leu Ala Ala  
 130 135 140

Arg Asn Ile Leu Leu Ser Glu Lys Asn Val Val Lys Ile Cys Asp Phe  
 145 150 155 160

Gly Leu Ala Arg Asp Ile Tyr Lys Asp Pro Asp Tyr Val Arg Lys Gly  
165 170 175

Asp Ala Arg Leu  
180

```
<210> 10
<211> 180
<212> PRT
<213> Homo sapiens
```

```
<400> 10
Ile Leu Ile His Ile Gly His His Leu Asn Val Val Asn Leu Leu Gly
1           5           10           15
```

Ala Cys Thr Lys Pro Gly Gly Pro Leu Met Val Ile Val Glu Phe Cys  
20 25 30

Lys Phe Asp Asn Leu Ser Thr Tyr Leu Arg Ser Lys Arg Asn Glu Phe  
35 40 45

Val Pro Tyr Lys Thr Lys Gly Ala Arg Phe Arg Gln Gly Lys Asp Tyr  
50 55 60

Val Gly Ala Ile Pro Val Asp Leu Lys Arg Arg Leu Asp Ser Ile Thr  
65 70 75 80

Ser Ser Gln Ser Ser Ala Ser Ser Gly Phe Val Glu Glu Lys Ser Leu  
85 90 95

Ser Asp Val Glu Glu Glu Glu Ala Pro Glu Asp Leu Tyr Lys Asp Phe  
100 105 110

Leu Thr Leu Glu His Leu Ile Cys Tyr Ser Phe Gln Val Ala Lys Gly  
115 120 125

Met Glu Phe Leu Ala Ser Arg Lys Cys Ile His Arg Asp Leu Ala Ala  
130 135 140

Arg Asn Ile Leu Leu Ser Glu Lys Asn Val Val Lys Ile Cys Asp Phe  
145 150 155 160

Gly Leu Ala Arg Asp Ile Tyr Lys Asp Pro Asp Tyr Val Arg Lys Gly  
165 170 175

Asp Ala Arg Leu  
180

<210> 11  
<211> 180  
<212> PRT  
<213> Rattus sp.

<400> 11  
Ile Leu Ile His Ile Gly His His Leu Asn Val Val Asn Leu Leu Gly  
1 5 10 15

Ala Cys Thr Lys Pro Gly Gly Pro Leu Met Val Ile Val Glu Phe Cys  
20 25 30

Lys Phe Gly Asn Leu Ser Thr Tyr Leu Arg Gly Lys Arg Asn Glu Phe  
35 40 45

Val Pro Tyr Lys Ser Lys Gly Ala Arg Phe Arg Ser Gly Lys Asp Tyr  
50 55 60

Val Gly Glu Leu Ser Val Asp Leu Lys Arg Arg Leu Asp Ser Ile Thr  
65 70 75 80

Ser Ser Gln Ser Ser Ala Ser Ser Gly Phe Val Glu Glu Lys Ser Leu  
85 90 95

Ser Asp Val Glu Glu Glu Glu Ala Ser Glu Glu Leu Tyr Lys Asp Phe  
100 105 110

Leu Thr Leu Glu His Leu Ile Cys Tyr Ser Phe Gln Val Ala Lys Gly  
115 120 125

Met Glu Phe Leu Ala Ser Arg Lys Cys Ile His Arg Asp Leu Ala Ala  
130 135 140

Arg Asn Ile Leu Leu Ser Glu Lys Asn Val Val Lys Ile Cys Asp Phe  
145 150 155 160

Gly Leu Ala Arg Asp Ile Tyr Lys Asp Pro Asp Tyr Val Arg Lys Gly  
165 170 175

Asp Ala Arg Leu  
180